REMARKS

Claims 1-19 are pending. Claims 1-19 are rejected.

Claim 1 has been amended. Claims 2 and 17 have been cancelled. The limitations of Claims 2 and 17 have been included in Claim 1.

In the Advisory Action of May 2, 2006 the Examiner states that Hansen et al. teach the use of an alpha-hydroxypolycarboxylic acid and a polyol can cause intrafiber crosslinking (column 34, lines 4-6, 20-28). Applicant submits that in this case Hansen only teaches that specific type of binders that can also crosslink are polyols, polyaldehydes, polycarboxylic acids and polyamines and there is no reference to an alpha-hydroxypolycarboxylic acid in the citation, furthermore, there is no suggestion of the combination of a polycarboxylic acid with a polyol in a crosslinking reaction with cellulose fibers. Column 4, lines 32-46 only gives examples of binders that have at least two functionalities on the molecule and include binders such as polyols, polyamides, polycarboxylic acids, polyaldehydes, amino alcohols and hydroxyl acids.

Hansen et al. teach the combination of binders to achieve his invention and refers to these in the context of those that have a functional group that is capable of forming a hydrogen bond or a coordinate covalent bond with particles that have a hydrogen bonding or coordinate covalent bonding functionality (column 4, lines 52-59 and column 3, lines 55-60). Hansen et al. state that specific types of binders that can crosslink are polyaldehydes, polycarboxylic acids and polyamines, column 34, lines 5-8. When these are used during the curing step in forming fibers with high bulk, the binding affinity is lost thus destroying the invention. Accordingly, to maintain the binding capability of the binder, Hansen et al. indicate that in processes that use binders that can act as crosslinkers, the fibers should contain at least 20 % water to prevent covalent bond formation during curing of the fibers thus achieving his invention i.e. the binding affinity of the binder with a fiber or particle. Applicants submit that Hansen et al. do not teach the combination of the crosslinking agent and a polyol to achieve the instant invention rather, Hansen et al. teach that these are used alone or in combination to achieve the binding effect in his invention.

In column 53, Example 32, lines 37-53, Hansen states that in certain situations the binder can also form covalent intrafiber crosslinks. Polycarboxylic acids (such as citric acid), polyols, (such as dipropylene glycol) and polyamines such as ethylene diamine) can function as crosslinking agents and are consumed during the curing step in the formation of covalent crosslinks. Accordingly, in the limited case in which the crosslinking agent is also a binder, steps should be taken to prevent the binder from being consumed as a crosslinker in the curing step thus maintaining its binding ability. Applicants submit that even in these situations where the binder may act as a crosslinking agent, Hansen et al. do not teach the combination of a crosslinking agent and a polyol in the intrafiber crosslinking reaction to arrive at the instant invention in Claim1.

The rejection of Claims 1, 5-7, 9-12, and 16-19 under U.S.C. §103(a) as unpatentable over Hansen et al. in view of Cook et al. is respectfully traversed. The Examiner is requested to review Claim 1, as amended. All the remaining claims depend from Claim 1. As stated above, the Hansen et. al. reference does not teach crosslinking of cellulose fibers with a crosslinking agent in the presence of a polyol.

The Examiner uses the Cook reference to show that crosslinked fibers of brightness greater than 86 as having a better aesthetic appeal to customers. In the May 2, 2006 Advisory Action he also uses the Hatsuda et al. reference to teach that an absorbent product having values outside the disclosed L a, b are not favorable to customers.

Cook teaches odor removal and brightness improvement by contacting the citric acid crosslinked fibers with an alkaline solution such as sodium hydroxide and an oxidizing solution such as hydrogen peroxide to remove odor and improve brightness. The reference does not teach or suggest crosslinking of cellulose with a crosslinking agent in the presence of a polyol during the crosslinking reaction to improve brightness or Whiteness Index, rather, the reference teaches a post treatment of the crosslinked fibers with a bleaching agent to achieve brightness.

Hansen does not teach the use of a crosslinking agent and a polyol during the crosslinking reaction. The Examiner also states that Hansen et al. does not teach brightness greater than 69 or greater than 79 ISO. Cook also does not teach the use of polyols during the crosslinking reaction. Since neither reference fails to teach, suggest

or provide any motivation to combine the references to make the claimed invention of the amended claim and all the elements are not present in the combined references, the claimed invention is nonobvious and patentable over the cited references.

Withdrawal of the rejection is respectfully requested.

Claims 2-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen et al. (6340411) in view of Cook et al. (5562470) and further in view of Hatsuda et al. (6562879).

Claims 2 has been cancelled. Claims 3 and 4 depend from Claim 1. Claim 1 has been addressed above. The Examiner is requested to reconsider these in view of the amendment to Claim 1.

The Hansen and Cook references have been addressed above.

The objective of the Hatsuda et al. reference is to provide a water absorbent resin powder. Hatsuda et al. do not teach improving whiteness in crosslinked fibers.

Applicants submit the reference is from non- analogous art. The Hatsuda et al. reference relates to a process for making water absorbent resin powders, the instant invention relates to whiteness in crosslinked fibers. That is, the reference is outside the field of the inventor's endeavor. The Examiner states that since Hatsuada discloses that the crosslinking reaction system can contain cellulosic fibers, polycarboxylic acids and polyhydric alcohols, it reinforces the case for analogous art. Applicants respectfully disagree. The fact that these materials can be added during polymerization has no more relevance to analogous art than addition of other materials such as carbonates, carbon dioxide, azo componds, inert organic solvents, starch, surfactants chelating agents and chain transfer agents and claim them as analogous art. Like resins, these additives are from non-analogous art and therefore the skilled artisan would not be motivated to search in resins for whiteness improvement in fibers any more than he would be motivated to look in the field of, for example, carbonates, dyes, solvents, chelating agents etc. to achieve whiteness in crosslinked fibers. Applicants submit the Examiner is merely using hindsight to support the combination with Hansen and Cook to arrive at the claimed invention. In *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443 (Fed Cir. 1992) the Federal stated as follows:

> It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that recontructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case for obviousness, There must be some reason, suggestion or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the invention itself...

Applicants submit there is no reason, suggestion or motivation to combine Hansen et al. with Cook and Hatsuada to arrive at the claimed invention and the Examiner has merely used hindsight to combine the references to arrive at the claimed invention. Also, neither the Hansen et al. nor the Cook et al. references teach crosslinked fibers that have an *L* value value greater than about 94.5, an *a* value between about -1.55 and 0.60, or a *b* value less than about 8.5. Even if all the reference are combined, all the element of the amended Claim 1 are not present in the references. Withdrawal of the rejection is respectfully requested.

Claims 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hansen et al. (6340411) in view of Cook et al. (5562470) and further in view of Jewell et al. US Patent Publication 2003/0205342.

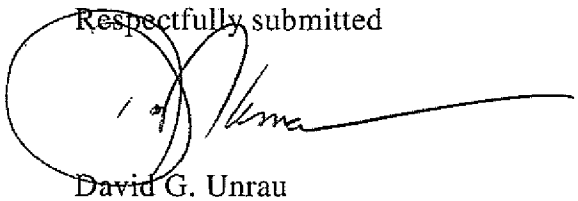
Claims 7-9 are dependent from Claim 1. Claim 1 has been addressed above. The fact that Jewell discloses citric acid, tartaric and/ or malic acid as crosslinking agents for cellulose bears no further weight in showing obviousness since Hansen does not show crosslinking cellulose with carboxylic acids in the presence of polyols, neither does he show whiteness, L values or wet bulk. Cook does not suggest the use of a crosslinking agent in the presence of C_4-C_{12} polyols and uses a post treatment to achieve brightness. Jewell cites citric acid, tartaric acid, malic acid, and others, as crosslinking agents but does not teach the use of polyols to achieve the Whiteness Index of the crosslinked fibers of the invention. Applicants submit there is no suggestion, teaching or motivation to combine the references to arrive at the claimed invention in Claim 1. Furthermore, all the elements of Claim 1 are not in all the references even if they were combined. Withdrawal of the rejection is therefore respectively requested.

Applicants have noted the double patenting rejections in response file on November 22, 2005, and April 19, 2006 and will file a terminal disclaimer on the Examiner's indication of allowable subject matter in this and one or more of the copending applications.

CONCLUSION

Based on the amendment to the claims and the remarks, the Examiner is respectfully requested to reexamine the application, to reconsider and withdraw the rejection of the claims and to promptly allow the case and allow it to issue. If the Examiner has any further questions, he is invited to call the Applicant's Agent at the number listed below.

Respectfully submitted



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